

Thursday, 20 August 1987

- Winkler, T.J., Schachter, E.N., Tosun, T.,
Leiderer, B., Beck, G.J.
Assessment of Acute Pulmonary Effects of
Formaldehyde in an Environmental Chamber
Test Facility

16:45 Break

17:15 Discussion at Poster Walls (Area H2)

19:15 Workshop, Saal 10 (Room 10)

The Danish Town Hall Study Leader: P. Skov, Dr., Copenhagen (DK)

- Frank, C., Skov, P.
Objective Signs of Eye Irritation in Buildings
Suspected of Causing Indoor Climate Problems
- Valbjørn, D., Skov, P.
Influence of Indoor Climate on the Sick Building
Syndrome Prevalence
- Nielsen, P.A.
Potential Pollutants - Their Importance to the
Sick Building Syndrome and Their Release
Mechanism

18:00 Introducing the New President, Saal 3 (Hall 3)



Tuesday, 18 August 1987

9:45

Poster Session, Saal 6 (Room 6)

Measures to Guarantee Adequate Indoor Air Quality

Co-Chairpersons:

- J.H. Billick, Dr., Chicago (USA)
- J.M. Dave, Professor, New Delhi (IND)

Presentations (5 min. each):

- Alevantis, L.E., Hayward, S.B.
A Computer-Controlled System for Measuring
Building Air Exchange Rates Using Sulfur
Hexafluoride as a Tracer Gas
- Bugan, A.
New Concept of Air Distribution in Operating
Room
- Cole, R.J., Sterling, E.M.
Designing Office Buildings for Improved
Environmental Quality
- Drangsholt, F.
Ventilation by Demand
- Furr, S., Boelman, E.C.
Characteristics of Concentration Changes in a
Clean Room
- Georgakos, K.S., Smith, J.W., Goodfellow, H.D.
The Use of Tracer Gas and Analytical Models to
Study Diffusion and Recirculation from
Laboratories
- Guftmann, K.
Proposed Method of Indoor Air Pollution
Control by Dilution with Outside Air
- Hagenbruch, D.
Fan Standards in Clean-Room Technology
- Matthews, T.G., Thompson, C.V., Monar, K.P.,
Dudney, C.S., Hawthorne, A.R., Harper, J.P.,
Williams, A.B.
Impact of HVAC Operation and Leakage on
Ventilation and Intercompartment Transport:
Studies in a Research House and 39 Tennessee
Valley Homes
- Tanaka, T., Matsumoto, T.
Evaluation of Performance of VAV System in
Super Energy Conservation Building

Tuesday, 18 August 1987

- 11:00 Break
- 11:30 Discussion at Poster Walls (Area G I)
- 9:45 Poster Session, Saal 8 (Room 8)

"Sick Buildings": Case Studies

Co-Chairpersons:
 P.J. Dennis, Dr. Porton Down (GB)
 O. Valbjorn, Dr. Hørsholm (DK)

Presentations (5 min. each)

- Berglund B., Berglund U., Lindvall Th., Lundin L.
Air Quality in a Sick Library over a Period of 16 Weeks
- Finnegan M.J., Pickering A.C.
Prevalence of Symptoms of the Sick Building Syndrome in Buildings without Expressed Dissatisfaction
- Finnegan M.J., Pickering A.C., Gill F.S., Ashton I.
Negative Ions and the Sick Building Syndrome
- Hedge A., Sterling F.M., Collett C.W., Mueller B., Robson R.
Indoor Air Quality Investigation as Psychological Stressor
- Helsing K.J., Billings C.E., Conde J.
Care of a Sick Building: A Case Study
- Konopinski V.J.
Gaseous Pollutants in a New Office Building
- Morris E., Hawkins L.
The Role of Stress in the Sick Building Syndrome
- Nörback D., Torgén M.
A Longitudinal Study of Symptoms Associated with Wall-to-Wall Carpets and Electrostatic Charge in Swedish School Building
- Pollmann L., Pollmann B.
Observations on the "Sick Building Syndrome" in a Newly Built Large Hospital
- Potting J., van de Sandt P., ter Haar Romeny-Wachter I., Brunekreef H., Boleij J.S.M.
Health Complaints, CO Levels and Indoor Climate in Dutch Schools



Thursday, 20 August 1987

- 15:15 Poster Session, Saal 9 (Room 9)

Odours, Irritants and Formaldehyde

Co-Chairpersons:
 T. Engen, Professor, Providence (USA)
 M. Hangartner, Dr. Zürich (CH)

Presentations (5 min. each)

- Ahlstrom R., Berglund B., Berglund L., Engen T., Lindvall T.
Odor Perception in Smokers, Non-Smokers and Passive Smokers
- Arundel A., Collett C., Sterling E., Steeves J.
Low Relative Humidity and Eye, Nose, Throat and Skin Irritation
- Berglund B., Berglund U., Hogman L., Johansson I., Lindvall T.
The Psychophysics of Formaldehyde Odor
- Cain W.S.
A Functional Index of Human Sensory Irritation
- Crump D.R., Gardiner D.
Sources and Concentrations of Aldehydes and Ketones in Indoor Environments in the U.K.
- Engen T.
Adaptation to Odors
- Howett Jr. C.T., Newton L.R., Stevens K.R.
Formaldehyde: A Case Study
- Keller R., Hummel P.
Air and Water Analysis of Formaldehyde and of Other Aldehydes
- Konopinski V.J.
Formaldehyde Sensitivity and Control
- Marutzky R.
Formaldehyde Injuries in Prefabricated Houses: Causes, Prevention and Reduction
- Meyer C.B., Endroby E., Sundin B., Mansson B.
Variations of Formaldehyde Exposure in Homes and Office Buildings
- Raab K.H.
Risk Assessment of Odor Counteraction
- Sjöström H., Oehlmé M.
Convenient Method for Determination of Sub-ppb to ppm Levels of C-C Aldehydes Using Solid Adsorbent Sampling

08 AUG 87 11:00

2501644766

Thursday, 20 August 1987

15:15

Poster Session, Saal 8 (Room 8)

Sources of Volatile Organic Compounds and their Emissions

Co-Chairpersons:

- H. Ozkaynak, Dr., Cambridge (USA)
- M. Sonneborn, Dr., Berlin (D)

Presentations (5 min. each):

- Gustafsson H.N.O.
Proposal of an "Euro-Chamber" for Testing Formaldehyde and Other Indoor Air Pollutants
- Levin I.F.
A Procedure Used to Evaluate Building Materials and Furnishings for a Large Office Building
- Ohrbach K.H., Matuschek G., Kettner A.
Pyrolysis of Polymeric Materials for Construction, Room Decoration and Insulation
- Reist P.C., Reeves J.C., White J.B.
Developmental Status of the Indoor Air Source Emissions Database
- Rothweiler H., Knuth R., Schlatter C.
Formaldehyde in Indoor Air
- Sheldon L.S., Michael L.C., Pellizzari E.D., Wallace I.
Use of a Portable Gas Chromatograph for Identifying Sources of Volatile Organics in Indoor Air
- van der Wal J.F., Moons A.M.M., Steenlage K.
Thermal Insulation as a Source of Air Pollution
- White J.B., Lederer B.P., Boone P.M., Hammond S.K.
Characterization of Particle and Organic Emissions from Unvented Kerosene Space Heaters
- Wolkoff P., Nielsen G.D.
Carbonless Copy Paper as a Potential Non-Building Indoor Irritant

16:30

Break

17:00

Discussion at Poster Walls (Area A2)



Tuesday, 18 August 1987

11:00

Break

11:30

Discussion at Poster Walls (Area D1)

9:45

Poster Session, Saal 10 (Room 10)

Combustion Gases: Analysis and Concentration Levels

Co-Chairpersons:

- E. Lahmann, Professor, Berlin (D)
- D. Moschandreas, Dr., Chicago (USA)

Presentations (5 min. each):

- Atkins D.H.F., Law D.V.
Indoor-Outdoor Nitrogen Dioxide Concentration Ratios for Homes with Gas and Electric Cooking
- Baker P.E., Cunningham S.J., Becker E.W., Colome S.D., Wilson A.L.
Evaluation of Housing and Appliance Characteristics Associated with Elevated Indoor Levels of Nitrogen Dioxide
- Baker P.E., Cunningham S.J., Becker E.W., Colome S.D., Wilson A.L.
An Overview of the Residential Indoor Air Quality Characterization Study of Nitrogen Dioxide
- Colome S.D., Lambert V.E., Castaneda N.
Performance Characteristics of Palmes Diffusion Tubes Used for Measurement of Nitrogen Dioxide Outside Residential Sites
- Colome S.D., Wilson A.L., Becker E.W., Cunningham S.J., Baker P.E.
Analysis of Factors Associated with Indoor Residential Nitrogen Dioxide: Multivariate Regression Results
- Colome S.D., Wilson A.L., Becker E.W., Cunningham S.J., Baker P.E.
Temporal Evaluation of Nitrogen Dioxide in Thirty Seven Residences
- Goldstein J.F., Andrews H., Bodian C., Keller G.
Variability in Nitrogen Dioxide Readings Within and Between New York Inner-City Apartments
- Hemphill C.P., Ryan P.B., Brink L.H., Nagda N.L., Kohn M.D., Fortmann R.C.
Estimation of Nitrogen Dioxide Concentrations in Homes Equipped with Unvented Gas Space Heaters

Tuesday, 18 August 1987



Thursday, 20 August 1987

- Knaflitz, F., Knaflitz, A., Lawrence, J.R.
Assessment of the Impact of Indoor Air Pollution
Resulting from Wood Burning Appliance Use
- Knaflitz, F., Knaflitz, A.
Survey of Indoor Air Quality (NO_x) Concentrations
- Lehn, E., Knaflitz, F., Bruckner, B.
Real Time Concentration Measurements of CO₂
and Volatile Organic Compounds
- Pöhlitz, K.H.
Monitoring of Inorganic Air Contaminants in
Indoor Environments by Direct Reading
Diffusion Tubes
- Steiner, J.P., Chan, S.C.
Portable Monitor for the Measurement of Indoor
NO_x Concentrations
- Pöhlitz, K.H.
A Field Study of Nitrogen Oxide Levels Inside
and Outside an International Airport Terminal
- Wilson, A.B., Gibson, S.D., Baker, P.E.,
Cunningham, S.J., Becker, I.W., Bope, W.G.
Comparison of Passive and Chemiluminescence
Monitors for Determining One-Week Average
Nitrogen Dioxide Concentrations

11:15 Break

11:45 Discussion at Poster Walls (Area C 2)

Plenary Lectures, Saal A (Hall 3)

**14:00 Air-conditioning: New Horizons -
New Opportunities**
H. Esdorn, Professor, Berlin (D)

14:30 A Solution to the Sick Building Mystery
P.O. Fanger, Professor, Lyngby (DK)

15:15

Poster Session, Saal 6 (Room 6)

Ventilation Effectiveness

Co-Chairpersons:

E. Mayer, Dr. Holzkipchen (D)
M. Sundberg, Dr. Gävle (S)

Presentations (5 min. each):

- Bäckström, B.
Pressures Inside Buildings - A Dominant Parameter for Calculating Effective Natural Ventilation
- Fahl, A., Franghauser, E.
Natural Draft Ventilation - Measurement, Simulation, Contribution to Basic Ventilation
- Fitzner, K.
Air Outlets for Displacement Flow and Their Influence on the Flow Pattern With Various Kinds of Heat Sources
- Hagen, K., Trümper, H.
The Relations of Air Humidity in Dwellings at Different Ventilation Systems (Natural & Mechanical)
- Hansen, S.O., Mathisen, H.M.
Sick Buildings - A Ventilation Problem?
- Kubo, T., Fujii, S., Hayakawa, I.
On the Performance of Turbulent Airflow Clean Rooms Based on Airborne Particle Counts in a Model Room
- Narasaki, M., Yamanaka, T., Higuchi, M.
Influence of Turbulent Wind on Ventilation
- Niemela, R., Aalto, H., Tossavainen, A.
Evaluation of Low-Cost Tracer Techniques for Measuring Air Exchange Rates in Buildings
- Norrell, L.
Conversion of a Natural Draught Ventilation System to Mechanical Exhaust with Heat Pump - A Case Study
- Olsson, H.
Increased Ventilation Efficiency in Rooms
- Vercauteren, M., Leaderer, B.P., Dietz, R.N.
Influence of Airflow on the Performance of the Perfluorocarbon Tracer Technique for Measuring Ventilation Rates

16:15

Break

16:45

Discussion at Poster Walls (Area G 2)

2501644768

Thursday, 20 August 1987

Symposium, Saal 7 (Room 7)

Microbiological Indoor Pollutants:

Sources, Characterization and Health Effects

Organizer: H. Rüden, Professor

H.J. Moriske, Dr. Berlin (D)

Chair: P. Morey, Dr., Golden Valley (USA)

Presentations (45 min. each)

- Tyndall R.L., Dudgeon C.S., Hawthorne A.R., Jernigan R., Ironside K., Mettler P. Microflora of the Typical Home
- Morey P., Bunge H., Chagny M., Feeley J., Kreiss K., Otten J., Peterson K. Assessment of Non-Pathogenic Bioerosols in Indoor Environments
- Yoshizawa S., Ise I., Sugawara F., Ozawa S., Kohsaka Y., Matsumae A. Microbiological Contamination from Air Conditioning Systems in Japanese Buildings
- Reponen T., Nevalainen A., Ruunemaa T., Anttonen T., Korhonen A., Ruunemaa T. Airborne Fungal Spore and Bacteria Levels in Finnish Homes with Different Ventilation Systems
- Holmberg K. Indoor Mould Exposure and Health Effects
- Jantunen M.J., Nevalainen A., Rytönen A.-L., Pellikka M., Kalliohokki P. The Effect of Humidification on Indoor Air Fungal Spore Counts in a Apartment Building
- Finnegan M.J., Eickering A.C., Davies P.S., Austwick P.K.C., Warhurst D.C. Amoebae: The Cause of Humidifier Fever?

17:00 Break

17:30 Discussion

Tuesday, 18 August 1987

Symposium, Saal 3 (Hall 3)

Combustion Gases: Characterization and

Health Effects

Organizer: J. Boleij, Professor, Wageningen (NL)

Chair: K. Maeda, Professor, Tokyo (J)

Presentations (15 min. each)

- Traynor G.W., Azzi J.C., Apte M.G., Smith B.V., Green J.L., Smith-Reiser A., Novak K.M., Moses D.O. Macro-model for Assessing Indoor Exposures to Combustion-Generated Pollutants
- Harlos D.P., Speigler J.D., Billick J. Continuous Nitrogen Dioxide Monitoring During Cooking and Commuting: Personal and Stationary Exposures
- Colome S.D., Lambert W.E., Castaneda N. Determinants of Carbon Monoxide Exposure in Residents of Ischemic Heart Disease Patients
- Letret F. Errors in Exposure Variables and Their Role in Obscuring Exposure-Response Relations: The Case of Indoor Exposure to Nitrogen Dioxide and Fine Particles
- Goldstein J.F., Andrews L.R., Lieber K., Kourakis G., Nazem F., Huang P., Hayes C. Acute Exposure to Nitrogen Dioxide and Pulmonary Function
- Herwick M., Leaderer B.P., Stolwijk J.A.J., Zaganiski R.T. Association between Nitrogen Dioxide Levels and Lower Respiratory Symptoms in Children Exposed to Unvented Combustion Sources
- Brunekreef B., Fischer P., Houthuijs D., Remijn B., Boleij J. Health Effects of Indoor NO₂ Pollution

17:00 Break

17:15 Discussion

Tuesday, 18 August 1987

15:15

Symposium, Saal 4/5 (Room 4/5)

Measures to Guarantee Adequate Indoor Air Quality

Organizer: P.O. Fanger, Professor, Lyngby (DK)
Chair: O. Seppänen, Professor, Helsinki (SF)

Presentations (15 min. each):

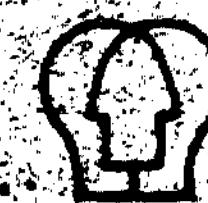
- Komiya H., Yoshizawa S., Tochihara Y., Kimura E., Ohnaka T.
The Investigations on IAQ and Subjective Evaluations of Occupants for Indoor Environments in Japanese Office Buildings
- Savolainen T., Raunemaa T., Wellman K.
Automatic Measurement and Data Collection System on Indoor Air Study at Three Small Housing Flats
- Joki M.V., Rohles F.H.
Improving Occupant Well-Being with Ionized Air
- Lundqvist G.R., Aalvikke C.
Airborne and Settling Particulates in a Day-Care Institution: Field and Exposure Chamber Studies
- Weschler C.J., Shields H.C.
A Detailed Study of the Effects of Ventilation, Filtration and Outdoor Air on the Composition of Indoor Air at a Telephone Office Building
- Ancker K., Göthe C.-J., Bjurström R.
A Quantitative Method for Measuring Air Recirculation
- Seppänen O.A.
Ventilation and Indoor Air Quality
- Trepte L., Le Marié A.
Minimum Ventilation Rates and Ventilation Strategies

17:15

Break

17:30

Discussion



Thursday, 20 August 1987

17:00

Break

17:30

Discussion

15:15

Symposium, Saal 4/5 (Room 4/5)

Controls: Source Modification and Air Cleaning
Organizer: D. Grimsrud, Dr., Berkeley (USA)
Chair: J. Sundell, M.Sc., Solna (S)

Presentations (15 min. each):

- Godish T., Rouch J.
Control of Residential Formaldehyde Levels by Source Treatment
- Nazaroff W.W., Cass G.R.
Mass-Transfer Aspects of Pollutant Removal at Indoor Surfaces
- Klein C.F., Reilwani S.M., Moschandreas D.J.
Evaluation of a Proprietary Detector as an Indoor Air Quality Sensor
- Reilwani S.M., Moschandreas D.J., Billick H.
Indoor Air Quality Control Capabilities of Desiccant Materials
- Kettner A., Klusmeier W., Ohrbach K.H.
A New Filter System for Indoor Pollutant Separation (Particles, Organic and Inorganic Gases)
- Kimmel J.
Performance of Electrostatic Precipitators in Restaurants
- Sandberg M., Mellin A.
Artificial Electrostatic Fields as Air Cleaning Systems in Rooms

17:00

Break

17:30

Discussion

06.10.87 14.1



Thursday, 20 August 1987

Tuesday, 18 August 1987

9:45 Workshop, Saal 10 (Room 10)

15:15 Symposium, Saal 12 (Room 12)

Fungal Spores in Indoor Air

Chair: Professor G. Kunze, Phoenix, Berno (D)

Indoor Air Pollution in Developing Countries

Chair: K.K. Sinha, Dhaka, Bangladesh

14:00 Symposium Summaries, Saal 3 (Hall 3)
(Symposia of Workshop, 10 Morning)

Presentations, Saal 12 (Room 12)

14:10 Plenary Lecture, Saal 3 (Hall 3)

Indoor Air Pollution Control

Chair: M. K. Sinha, Dhaka, Bangladesh

Presentations, Saal 12 (Room 12)

15:15 Symposium, Saal 12 (Room 12)

Papers and Summaries

Chair: R. L. Smith, The Netherlands

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

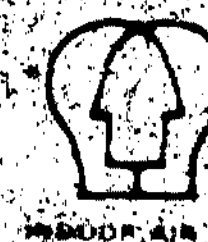
Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Presentations, Saal 12 (Room 12)

Thursday, 20 August 1987



Tuesday, 18 August 1987

- 11:30 Break
- 12:00 Discussion
- 9:45 Poster Session, Saal 6 (Room 6)
- Controls: Source Modification and Air Cleaning**
Co-Chairpersons:
W.W. Nazaroff, Dr. Pasadena (U.S.A.)
E. Rindahl, Professor, Trondheim (N.)
- Presentations (5 min. each):**
- Chang P.C., Chang P.
Low Cost Control Technology for VOCs Emissions
 - Hangartner M., Wanner H.-U.
Test Criteria for Air Cleaners
 - Meim Ch., Hangartner M., Wanner H.-U.
Indoor Measurements of Nitrogen Dioxide and Sulfur Dioxide in Mechanically and Naturally Ventilated Rooms Compared with Outdoor Measurements
 - Norell L.
Ventilation Requirements in Building for Control of Indoor Air
 - Noyse D., Relwani S.M., Moschandreas D.J.
Development of a Desiccant Based Air Conditioner with Indoor Pollution Control Capabilities
 - Panzhauser L., Heindl W., Fall A.
Advisory Model Formaldehyde
 - Sammaljärvi E.
How to Build a Healthy House
- 10:45 Break
- 11:15 Discussion at Poster Walls (Area E 3)

- Henschel D.B., Scott A.G.
Some Results from the Demonstration of Indoor Radon Reduction Measures in Block Basement Houses
- Jansson B., Tholander M., Axelsson O.
Exposure to Radon in Swedish Dwellings: Attitudes and Elimination
- Jonsson G.
Some Radon Measurements indoors and in Ground in Sweden
- Keskinen T., Lehtimäki M., Janki K.
Reduction of Radon Progeny Concentration by Means of Unipolar Ionization
- Moghissi A.A., Schmitt A., Deliacono M.J.
Enhancement of Exposure to Radon Progeny as a Consequence of Passive Smoking
- Quindos L.S., Fernandez P.L., Soto J.
Building Materials as a Source of Exposure in Houses
- Sanchez D.C., Hubbard L.M., Harrie D., Turk B.H.
The Use of Diagnostic Measurements to Enhance the Selection and Effectiveness of Radon Mitigation for Detached Dwellings
- Strömberg O., Norell L.
Ventilation Measures in Single-Family Houses with High Radon Concentrations

- 16:15 Break
- 16:45 Discussion at Poster Walls (Area E 1)
- 15:15 Poster Session, Saal 9 (Room 9)

- "Sick Buildings": Indoor Air Quality Research**
Co-Chairpersons:
M.J. Finnegan, Dr. London (GB)
H.-G. Meyer, Professor, Berlin (D)
- Presentations (5 min. each):**
- Berglund B., Berglund U., Ingen T.
Do "Sick Buildings" Affect Human Performance? How Should One Assess Them?

Tuesday, 18 August 1987

- Collier G.W., Sterling E.M., McIntyre E.D., Sweeney J.J., Weirich J.J.
The Building Performance Database: An Analytical Tool for Indoor Air Quality Research
- Harrison J., Pickering A.C., Finnegan M.J., Austwick P.K.C.
The Sick Building Syndrome: Further Prevalence Studies and Investigations of Possible Causes
- Hedge A., Wilson S., Buxton P.S., Robertson A.S., Harris-Bass J.
Indoor Climate and Employee Health in Offices
- Knüttel H., Kutz T., Panzhauser E.
Sick Buildings - A Phenomenon of Internal Information Processing
- Lercher P., Hornigal J., Kofler W.W.
Possible Combined Health Effects in White Collar Workers by Complex Exposures
- Neaker V.H., Murel J.-G.
A Field Study in Three Office Towers in Quebec, Canada
- Norback D., Rand G., Michel I., Amroff S.
Over the frequency of Skin and Airway Symptoms Among Persons in Sick Buildings and Polluted Industrial Environments in Relation to Exposure
- Robles J.E.H., Woods J.E., Mores P.R.
Occupant Assessment of the Indoor Environment
- Samuliyar E.
A Hypothesis on the Mechanisms of the Heat Effects of Mechanical Ventilation and Warm Air Heating
- Stenberg B.
Skin Complaints in Sick Buildings

16:30 Break

17:00 Discussion at Poster Walls (Area D2)



Thursday, 20 August 1987

- Lauridsen J., Muhaxhen M., Clausen G.H., Fanger P.O.
Ventilation and Background Odor in Offices

11:45 Break

12:15 Discussion

3:45 Symposium, Hall 7 (Room 7)

Sources of Volatile Organic Compounds and their Emissions

Organizer: W.G. Tucker, Dr. Research Triangle Park (USA)

Chair: J. Girman, Dr. Berkeley (USA)

Presentations (15 min each):

- Ozkaynak H., Rose J.B., Wallace L.A., Nelson W.C., Behmer J.
Sources and Emission Rates of Organic Chemical Vapors from Homes and Buildings
- Tschernig B.A.
Organic Emission Measurements via Small Chamber Testing
- Berglund B., Johansson L., Lindvall T.
Volatile Organic Compounds from Building Materials in a Simulated Chamber Study
- Girman J., Alevantis L., Kallasingam G., Petreas M., Webber L.
Bake-Out of An Office Building
- Knoppel H., Schaubert H.
Screening of Household Products for the Emission of Volatile Organic Compounds
- Hansen T.B.
Prediction of the Air Concentration Caused by the Use of Household Products Containing Organic Solvents
- Andelman J.B., Wald L.C., Myers S.M.
Indoor Air Pollution from Volatile Chemicals in Water

Wednesday, 19 August 1987

8:30 Symposium Summaries, Sael 3 (Hall 3)
(Symposia of Tuesday Afternoon)
Chair: B. Berglund, Dr. Stockholm (S)

9:00 Primary Lecture, Sael 3 (Hall 3)

9:30 Ventilation Effectiveness - Past and Future
E. Rodahl, Professor, Lundholm (N)

9:30 Airborne Bacteria and the Indoor Climate
P.J. Jorgens, Dr. Porten Dorn (GB)

9:45 Symposium, Sael 3 (Hall 3)

"Sick Buildings" - The State-of-the-Art
Organizer: L. Malmberg, Dr. Aarhus (DK)
Chair: T. Lindvall, Professor, Stockholm (S)

Presentations (15 min. each)

- Skov, P., Valbjorn, O.
The Sick Building Syndrome in the Office Environment - The Danish Town Hall Study
(See also related Workshop on "The Sick Building Syndrome")
- Stenberg, U., Malmberg, D.J., Rasmussen, S.M.
Office Building Investigation
- Malmberg, U., Perma, E., Squire, G., Capner, W., Allen, S., Parkinson, D.K.
Ventilation as a Cause of Tight Building Syndrome Symptoms
- Lunde, J.E., Hennrich, O.P., Seppanen, O.
Ventilation in an Office Building and Sick Building Syndrome - A Short-Term Trial
- Hager, I.
Monitoring of Symptoms as a Control of the Effect of Intervention in the Sick Building Syndrome
- Woods, J.E., Davies, G.M., Morry, P.R.
Office Worker Perceptions of Indoor Air Quality Effects on Discomfort and Performance
- Melville, L.
The Sick Buildings - A Sub-Population among the Problem Buildings

Thursday, 20 August 1987

8:30 Symposium Summaries, Sael 3 (Hall 3)
(Symposia of Tuesday Afternoon)
Chair: B. Berglund, Dr. Stockholm (S)

9:00 Primary Lecture, Sael 3 (Hall 3)

Environmental Tobacco Smoke:
A Public Health Issue
M.D. Lebowitz, Professor, Tucson (U.S.A.)

Symposium, Sael 3 (Hall 3)

Environmental Tobacco Smoke:
(Occurrence, Health Effects and Remedial Actions)
Organizer: B.P. Leader, Professor, New Haven (U.S.A.)
Chair: G. Perstegen, Dr. Stockholm (S)

Presentations (15 min. each)

- Einarsson, D.J., Benner, C.E., Bayona, J.M., Calo, J.M., Moore, R.L., Leno, J.D., Lee, M.L., Lewis, E.A., Hansen, L.D., Eathough, N.L.
Identification of Conservative Tracers of Environmental Tobacco Smoke
- Lewtas, J., Williams, K., Lefkowitz, G., Hamm, and K., Leader, B.
Environmental Tobacco Smoke: Mutagenic Emission Rates and Their Relationship to Urban Emission Factors
- Hoffmann, D., Brunnebaum, K.D., Haley, N.J., Seaton, D.W., Adams, J.D.
Nicotine Uptake by Nonsmokers Exposed to Passive Smoking Under Controlled Conditions and the Estimation of Cotinine
- Henderson, F.W., Morris, R., Reid, H.F., Hu, P.C., Marnett, L.J., Forehand, L., Burton, R., Lewtas, J., Hammond, S.K., Haley, N.J.
Serum and Urine Cotinine as Quantitative Measures of Passive Tobacco Smoke Exposure in Young Children
- Sigm, B., Rasmussen, M., Burner, R., Kearney, J.
Respiratory Effects of Early Childhood Exposure to Passive Smoke
- Sandler, D.P., Herzog, K.J., Cornsack, G.H.
Heart Disease Mortality in Persons Living with Smokers

Wednesday, 19 August 1987



Wednesday, 19 August 1987

11:15	Break	11:30	Break
11:45	Discussion at Poster Walls (Area B2)	12:00	Discussion
13:00	Free Afternoon	9:45	Symposium: Seal 4/5 (Room 4/5)
16:00	Social "Industry Reunion" Departure by coach from ICC and hotels. Brief Kempston, Etonel, Excessor, Novotel Airport. (See Social Programme)		Semi-Volatile and Particle-Bound Organic Compounds: Monitoring and Health Effects Organizer: L. Wallace, Dr. Washington (USA) Chair: M. Fugate, Dr. Zagreb (YU)
Evening	Return by coach to ICC and hotels in the city & Centre		Presentations (15 min each)
22:00			<ul style="list-style-type: none"> • Lewis R.G., Bond A.E. Non-Occupational Exposure to Household Pesticides • Lilje Th. H., Barnes E.S. Airborne Termiticide Levels in Houses on United States Air Force Installations • Olin K.L. Indoor Airborne Concentrations of Termiticides in Department of the Army Family Housing • Dahme M., Knoppe H. Analysis of Low Volatile ($> C_{10}$) and Particle Bound Indoor Pollutants: Assessment of a Sensitive Method and First Results • Daser J.M., Spengler J.D., Kozak P. A Comparison of the Organic Chemical Composition of Indoor Aerosols During Woodburning and Non-Woodburning Periods • Krause C., Engler M., Dube P. Pentachlorophenol-containing Wood Preservatives: Analysis and Evaluation
		11:15	Break
		11:45	Discussion

Wednesday, 19 August 1987

Wednesday, 19 August 1987



INDOOR AIR SOCIETY

9:45

Symposium, Saal 7 (Room 7)

Ventilation Effectiveness in Buildings and Rooms

Organizer: P. Warren, Dr. Walford (GB)
Chair: H. Bach, Professor Stuttgart (D)

Presentations (15 min. each)

- Majanen A., Helevarus T., Seppanen O.
Air Quality and Ventilation Efficiency in
Residential and Office Buildings
- Holmberg R. B., Folkesson K., Stenberg L.-G.,
Jansson G.
Experimental Comparison of Indoor Climate
using Various Air Distribution Methods
- Larsson H., Neller K., Sundén H. O.
Ventilation Efficiency in Clean Rooms
- Nagy N. L., Kohn M. D., Fortmann R. C.,
Biller H. H.
Detailed Evaluation of Return Exhaust Fans
- Kovaric K., Seppanen O., Siren K., Majanen A.
Turbulent Air Flow Measurements in Ventilated
Spaces
- Chermant E. J., Jut-Haut D.
Ventilation Effectiveness and ADPI
Measurements of Three Supply/Return Air
Configurations

11:15

Break

11:45

Discussion

9:45

Poster Session, Saal 6 (Room 6)

Multicomponent Field and Laboratory Studies

Co-Chairpersons:

A. R. Hawthorne, Di. Oak Ridge (USA)
H. S. Hu, Professor Beijing (P.R. China)

Presentations (15 min. each)

- Ammann H. M., Berry M. A.
Health Risk Profile for Indoor Air
- Bueren B.
Air Pollution in Museums: Libraries and
Archives: Sources, Effects and Controls

- Elvstrand J. H., Linsens H. F., Schult M., Jorde W.
Can Airborne Fungal Allergens Pass through an
Air Conditioning System? Preliminary Results
- Gravesen S.
Microbiological Studies on Carpets versus Hard
Floors in Non-Industrial Occupations
- Juraska N. B.
Quantitative Evaluation of Indoor Microbial
Contamination on Airborne, Surface and Bulk
Samples
- Nevalainen A., Jantunen M., Pellikka M.,
Pitkanen E., Kalipkowski P.
Airborne Bacteria, Fungal Spores and Ventilation
in Finnish Daycare Centers
- Ohlke H., Geers A., Beckert J.
Fungal Load of Indoor Air in Historical and Newly
Constructed Buildings Used by Public Services
- Raga S. H., Kausen R.
Indoor Aerobiological Pollution in Certain
Indian Domestic Environments
- Seidel A., Bay G., Bormer W., Seiber P.
Legionellae in Aerosols and Splashwaters in
Public Habitats
- Staub P., Seibold M., Heikenhuber M.
Indoor Air Mycology - Aspergillosis, Mucor-
myces and Cryptococcus Caused by Fungal
Spores from Indoor Air
- Sireci A. J., Rhame E. S., Vesey D., Murray B.
Control of Airborne Fungal Spores in a
University Hospital
- Sugawara F., Yoshizawa S.
Study on the Collection Characteristics of
Antigen Biological Air Samplers: Estimation of
Size Distribution of Real Aerosols
- TerKondek P.
Sources and Effects of Microbiological Indoor
Pollutants
- Tobin R. S., Baranowski E., Gilman A. R., Kuiper-
Goodman T., Miller J. D., Erdlings M.
Significance of Fungi in Indoor Air: Report of a
Canadian Working Group
- Van Wieringen N., Waptemakers M.,
Bruntjes B., Borel J.
Health Complaints and Indoor Moulds in
Relation to Mould Problems in Homes
- Volkmer H., Horn H., Gunter A.
Investigations on Individual Humidification

Wednesday, 19 August 1987



Wednesday, 19 August 1987

- Matsuki H., Yanagisawa Y., Spengler J., Kasuga H.
Urinary Cotinine Measurements for Passive Smokers Using Gas Chromatography and Flame Thermionic Detector with Glass Capillary Column
- McCurdy S.A., Kado N.Y., Schenker M.B., Hammond S.K., Benowitz N.L.
Measurement of Personal Exposure to Mutagens in Environmental Tobacco Smoke
- Muelenaer P., Reid H., Morris R., Saltzman L., Horstman D., Collier A., Henderson F.
Urinary Hydroxypyrene Excretion in Young Males Exposed Experimentally to Nitrogen Dioxide
- Santer L., Rivedal E.
Enhanced Transformation of Syrian Hamster Embryo Cells by Combined Exposure to Cigarette Smoke Extract and Benzo(a)Pyrene or Nickel Sulphate
- Scherer C., Westphal K., Haeplner I., Adikofer F.
Biomonitoring of Exposure to Potentially Mutagenic Substances from Environmental Tobacco Smoke (ETS)
- Yanagisawa Y., Matsuki H., Spengler J.D., Kasuga H.
Evaluation of Tobacco Smoke Using Urinary Cotinine as an Indicator of Dose and Hydroxypyrene as an Indicator of Effects

11:00 Break

11:30 Discussion at Poster Walls (Area D4)

9:45 Poster Session, Saal J0 (Room 10)

Microbiological Indoor Pollutants

Co-Chairpersons

B. Esch, Professor, Paris (F)

K. W. Horn, Professor, Berlin (DDR)

Presentations (5 min. each)

• Al-Zubaidy T.

Effects of Aircoolers on City Dwellers

• Bopp P.W. II

Airborne Microbial Flora in Florida Homes (Preliminary Study)

- Hawthorne A.R., Matthews T.G., Dudney C.S., Vo-Dinh T., Spengler J.D., Mage D.T.
Performance of Passive Indoor Air Quality Monitors in a Multipollutant Field Study
- Keskinen J., Kuitmaa V., Graeffe G., Hautanen J., Janka K.
Continuous Monitoring of Air Impurities in Dwellings
- Krause C., Kirschner W., Schulz C., Dube P.
Environment and Health: Survey and Analyses of Environmental Exposure Factors in the Federal Republic of Germany
- Landrus G., Zuchowski M., Rosenzweig-Witherspoon J., Hunter J.
Effects on Perceived and Measured Air Quality, Health, Absenteeism and Energy Consumption, of Installing Operable Windows in a "Sealed" School
- Large Jr. R.B.
Indoor Air Quality Within the Home as a Function of Electric or Gas End Utilization
- Matsumura T., Kametani K., Takeda M., Muramatsu S.
Simultaneous Determination Method of Personal Exposure Levels for Formaldehyde and Nitrogen Dioxide
- Sheldon L.S., Sager M.L., Cox B.G., Smith M.L., Martwell T.D., Kozzuto J.
Determination of the Impact of Infiltration Reduction Measures on House Air Leakage
- van Dongen J.E.F.
Indoor Air Problems in Different Types of Newly Built Dwellings
- Waldman J.M., Liou P.J., Harkov R., Greenberg A.
Field Study of Human Exposure to Benzo(a)pyrene in a Community Directly Impacted by a Foundry

11:00 Break

11:30 Discussion at Poster Walls (Area F2)

Wednesday, 19 August 1987

Wednesday, 19 August 1987

9:45

Poster Session, Sall 8 (Room 8)

Indoor Air Pollution in Developing Countries

Co-Chairpersons:

- D.R. Ahuja, Dr. New Delhi (IND)
- A. Cáceres, Dr. Guatemala City (GUA)

Presentations (5 min. each)

- Ashdane N.
Indoor-Outdoor Relationship of Total Suspended Particulate and Inhalable Particulate Matter in Tehran, Iran
- Belkadi R.
Neglected Environmental Human Requirements in Ethiopian Traditional Houses
- Brindson C.I., Panger M.R.
Particulate and Gaseous Pollutants in Residences in Nepal
- Faulstich J.
Combustion Gases: Sources, Characteristics and Health Effects
- Gadgil A.
Indoor Air Quality in Offices and Hospitals in High Altitude Himalaya
- Jindal S. Prakash
Studies on Environmental Aspects of Cook Stoves
- Koshi V., Venkatarama C., Ahuja D.R.
Thermal Performance and Emission Characteristics of Biomass Burning Heavy Stoves with Chimneys
- Majdal A., Prasad R., Guha B.K., Sarkar M.K.
Mechanism of Smoke Generation in Coal-Fired Chulha and its Means of Elimination
- Manoharachary C., Saibaba M.
Some Aspects and Prospects of Indoor Acromioclavicular from India
- Raza S.H., Nirmala B., Murthy M.S.R.
Studies on the Components of Air Borne Dust Particles in Indoor of Secunderabad Railway Station and Mess
- Saibaba M., Manoharachary C.
Studies on Atmospheric Fungi of Some Indoor Environments in India

11:00

Break

11:30

Discussion of Poster Walls (Area C-4)

9:45

Poster Session, Sall 9 (Room 9)

Environmental Tobacco Smoke: Biomarkers and Health Effects

Co-Chairpersons:

- N.J. Haley, Dr. Nashville (USA)
- J. Schuster, Dr. Schwetzingen (GER)

Presentations (5 min. each)

- Clausen M.H., Meier S.B., Fanger P.O.
The Impact of Air Washing on Environmental Tobacco Smoke
- Clausen G.H., Nielsen K.S., Sabing F., Fanger P.O.
Sensory Irritation from Exposure to Environmental Tobacco Smoke
- Carvall M., Kademkhalaf E., Inzell C.R., Blomdahl L., Johansson I.
Inhaled Amount of Tobacco Smoke During Passive Smoking
- Collins G.M., Collins C., Egan R., Lewis J., Hale N.
Elimination of Urinary Cotinine in Children Exposed to Known Levels of Side Stream Cigarette Smoke
- Haley N., Adams J.D., Atwood C.M., Hoffmann D.
Side Stream Smoke Uptake by Syrian Golden Hamsters in an Inhalation Bioassay
- Hopkins J., Schuster G., Adkeler F., Benham G., Grimmer G.
Urinary Excretion of Hydroxy-phenanthrene after Intake of Polyaromatic Hydrocarbons
- Kozawa K., Schuster G., Hopfinger L., Lutz H., Adkeler F.
Effect of Nicotine from Environmental Tobacco Smoke (ETS) on Different Inhalation Routes